

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL QUALITY

*West Lake*  
RECEIVED

NOV 9 1977

BUREAU OF  
SOLID WASTE MANAGEMENT

MEMORANDUM

TO Robert M. Robinson, P.E. Director  
Solid Waste Management Program  
SUBJECT Inspections of St. Louis County Landfills

FROM Howard J. Winburn Env. Eng. *HJW*  
St. Louis Regional Office  
DATE November 7, 1977

Reference our visits to the following landfills on Oct. 26 & 27, 1977. Attached are the Surveillance Records for West County Disposal Ltd. Sanitary Landfill and West Lake Landfill, Inc. Sanitary Landfill. I questioned Mr. Vernon Fehr by phone, concerning the grandlar insulation material they are disposing of in the sanitary landfill at West Lake. He informed me that it has the trade name of Perlite and is a mineral from Africa. It is shipped into the U.S.A. in slate form, heated in ovens to 1200-1400°F then chopped or ground into granules. It is used in pour insulation, for potting in flower shops, and in latex paints to give a rough textured paint surface. The Perlite disposed of at the landfill consists of grains too small in size to be used commercially. Perlite contains no nitrates, Mr. Fehr said.

HJW/lb

Site:	<i>West Lake A12</i>
ID #	<i>MBD07990932</i>
Break:	<i>17.8</i>
Other:	
<i>11-7-77</i>	

40241254



SUPERFUND RECORDS

DNR 0101

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL QUALITY  
SANITARY LANDFILL SURVEILLANCE RECORD

RECEIVED  
NOV 9 1977  
BUREAU OF  
SOLID WASTE MANAGEMENT

Date: 10/27/77 Days/Week Open: Six  
Name of Sanitary Landfill: West Lake Landfill, Inc. Sanitary Landfill  
Permit No: 118903 County: St. Louis  
Owner: West Lake Landfill, Inc. Operator: Vernon Fehr  
Address: Route 1, Box 206 Address: Route #1, Box 206  
Bridgeton, Missouri 63042 Bridgeton, Missouri 63042

I. Special Conditions and Approved Modifications

- A. Are there any special conditions or approved modifications of the satisfactory compliance subsections of the rules and regulations? (e.g. impermeable barrier, limited excavation, exceptions to daily cover requirements)  
\_\_\_\_\_ Yes ✓ No
- B. Is the sanitary landfill operation in compliance with the special conditions or approved modifications? (If "No," describe violations under "REMARKS.")  
\_\_\_\_\_ Yes \_\_\_\_\_ No

II. Check Types of Waste Accepted

	INDICATED ON PERMIT APPLICATION	REPORTED BY OPERATOR	AS OBSERVED
Municipal solid waste .....	<u>✓</u>		<u>✓</u>
Bulky waste .....	<u>✓</u>		<u>✓</u>
Dead animals .....			
Incinerator residue .....			
Demolition and construction waste .....			
Brush and untreated wood waste .....			
Septic tank pumpings .....			
Wastewater treatment plant sludges .....			
OTHER SLUDGES (SPECIFY)			
LIQUIDS (SPECIFY)			
INDUSTRIAL PROCESS WASTE (SPECIFY)			
HAZARDOUS WASTES (SPECIFY)			
OTHER WASTES (SPECIFY)			

III. Remaining Life of Landfill

- A. Estimated average volume of compacted solid waste received.  
20,000 cu yds (tons, yards/day, week)
- B. Estimated volume of remaining landfill covered by approved engineering plans.  
240 acre feet

#### IV. Satisfactory Compliance Subsections Regulations 80-3.010

Check all subsections: SAT — Satisfactory; UNS — Unsatisfactory. (If necessary describe "UNS" violations under "Remarks.")

SUBSECTION NUMBER	SATISFACTORY COMPLIANCE OPERATING PROCEDURE	SAT	UNS
<b>(2) SOLID WASTE ACCEPTED</b>			
(2)(C)1	Routine Sanitary landfill techniques of spreading and compacting solid waste and placing cover material daily.	✓	
(2)(C)2	Bulky solid waste crushed on solid ground and pushed onto working face near bottom of the cell.	✓	
(2)(C)3	Small dead animals covered immediately with soil or solid waste. Large dead animals placed in pit and covered with four feet compacted soil.		
(2)(C)4	Disposal of dewatered sludges on working face along with municipal solid waste.		
(2)(C)5	Incinerator and air pollution control residues prevented from becoming airborne.		
<b>(3) SOLID WASTE EXCLUDED</b>			
(3)(C)1	No unpermitted waste accepted.	✓	
(3)(C)2	Sign posted at entrance listing excluded wastes.	✓	
<b>(4) SITE SELECTION</b>			
(4)(C)1	Site accessible in all weather conditions. Temporary roads provided for delivery to working face.	✓	
(4)(C)2	Public roads or access roads to the site above flood elevation.	✓	
<b>(6) WATER QUALITY</b>			
(6)(C)1	Surface water courses and runoff properly diverted from the landfill. Sanitary landfill construction and grading to promote rapid surface water runoff without excessive erosion.	✓	
(6)(C)2	Leachate collection and treatment systems utilized where necessary to protect ground and surface water resources.	✓	
(6)(C)3	No groundwater in contact with solid waste.	✓	
<b>(7) AIR QUALITY</b>			
(7)(C)	No open burning without written permission of the proper air pollution agency and the Division.	✓	
<b>(8) GAS CONTROL</b>			
(8)(C)1	Decomposition gases adequately vented to prevent danger to occupants of adjacent property.	✓	
(8)(C)2	Decomposition gases vented in a manner to prohibit accumulation in explosive or toxic concentrations.	✓	
<b>(9) VECTORS</b>			
(9)(C)	Vector control programs implemented when necessary to prevent or rectify vector problems.		
<b>(10) AESTHETICS</b>			
(10)(C)1	Litter control devices utilized near working face and elsewhere as needed. Litter collected from fences, and the ground surface, and incorporated into the daily cell at the end of each day or containerized.		
(10)(C)2	Wastes easily moved by wind covered as necessary to prevent their becoming airborne and scattered.	✓	

SUBSECTION NUMBER	SATISFACTORY COMPLIANCE OPERATING PROCEDURE	SAT	UNS
<b>(10) AESTHETICS (continued)</b>			
(10)(C)3	On-site vegetation and natural windbreaks being utilized to improve appearance and operation of the sanitary landfill.		
(10)(C)4	Salvaged materials removed daily or stored in aesthetically acceptable containers or enclosures.	✓	
<b>(11) COVER MATERIAL</b>			
(11)(C)1	Daily cover applied regardless of weather in not less than a six inch layer. Cover material available in all weather conditions.	✓	
(11)(C)2	Intermediate cover applied to all areas idle for more than 60 days in a layer not less than one foot after compaction.	✓	
(11)(C)3	Final cover applied on each area as completed in a layer not less than two feet after compaction.	✓	
<b>(12) COMPACTION</b>			
(12)(C)1	Adequate equipment on-site, operated daily.	✓	
(12)(C)1A	Solid waste spread in layers not to exceed two feet and confined to smallest practical area.	✓	
(12)(C)1B	Wastes compacted to smallest practical volume.	✓	
(12)(C)1C	Cover material compacted as much as practical.	✓	
(12)(C)2	Preventive maintenance performed.	✓	
(12)(C)3	Daily task operating manual provided.	✓	
<b>(13) SAFETY</b>			
(13)(C)1	Fire extinguishers provided on oil equipment.		
(13)(C)2	Provisions for extinguishing fires in waste, equipment and structures.		
(13)(C)3	Communication equipment available.		
(13)(C)4	Scavenging prohibited.		
(13)(C)5	Controlled access to site by established roadways and limited to hours when operating personnel are on duty.	✓	
(13)(C)6	Traffic controlled and directed to appropriate disposing points.	✓	
(13)(C)7	Dust controlled for safety purposes and to prevent nuisances.	✓	
<b>(14) RECORDS</b>			
(14)(C)1A	Records of major problems and complaints.		
(14)(C)1B	Monitoring record maintained. a. leachate sampling and analyses, b. gas sampling and analyses, c. ground and surface water analyses.		
(14)(C)1C	Records of vector control efforts.		
(14)(C)1D	Records of dust and litter control efforts.		
(14)(C)1E	Records of quantity of waste handled.		
(14)(C)1F	Records of description, sources, and volume of special wastes listed in Subsection (3)(A).		

#### V. Operation Proceeding in Accordance With Approved Engineer Plans? (If "No," describe violations under "Remarks.")

Yes No

REMARKS Some garbage was exposed in the sidewall of the finished fill area on the northeast side of the landfill. This was due in some measure to the finished sidewall being sloped at greater than 3%.

(Attach additional sheets as necessary.)

BY

Howard J. Winburn  
SIGNATURE OF INVESTIGATOR

November 3, 1977

Mr. William Canney  
West Lake Landfill, Inc.  
Route 1, Box 208  
Bridgeton, MO 63044

RECEIVED  
NOV 9 1977  
BUREAU OF  
SOLID WASTE MANAGEMENT

Dear Mr. Canney:

This is to follow up on the inspection of the West Lake Sanitary Landfill on October 4, 1977 by a representative of the Missouri Department of Natural Resources. As a result of this inspection, the following unsatisfactory features are noted and recommendations for their correction are given.

UNSATISFACTORY FEATURES:

1. Two of the six groundwater monitoring wells on the approved engineering plans had not been drilled.
2. Results of analysis of leachate sampled in the leachate collection well had not been submitted every six months as required in the approved engineering plans.

COMMENTS AND RECOMMENDATIONS:

1. The two additional groundwater monitoring wells should be constructed according to the approved engineering plans. All six of the groundwater monitoring wells should be deep enough to monitor the groundwater quality. From past inspections, it appeared the wells had not been drilled deep enough or that the groundwater level had dropped because the wells have been dry. The wells must be drilled deep enough to be able to sample the groundwater. The two additional wells must be drilled deep enough to reach groundwater and the four wells already in place must also be drilled deeper, if necessary, to reach groundwater. The approved engineering plans call for one gallon water samples to be taken from each well every three months and analyzed, with laboratory analysis submitted to the Department. Such a program should be implemented immediately.
2. The inspection revealed that the leachate collection well had a considerable amount of liquid in it. The approved engineering plans require the leachate to be pumped out of collection well for necessary treatment and disposal when the leachate reaches one foot above the 24 inch impermeable clay pad. It appeared that

at least one foot of liquid was in the collection well. The approved engineering plans also require that any leachate in the collection well shall be sampled and analyzed every six months by a laboratory and results submitted to the Department. Therefore, regular monitoring of the sampled leachate should be taken to properly treat and dispose of the excessive leachate being generated.

3. It was observed that the solid waste was being dumped at the base of working face and then compacted up the working face and onto a flat area above the working face. It is felt that dumping the solid waste at the base of the working face is the first step to proper compaction of the solid waste. It is recommended that the solid waste be spread and compacted up the working face in layers no greater than two feet thick. By the time the machine reaches the top of the working face, all solid waste should have been compacted on the slope so that no waste is spread on the flat area above the face. It appeared at the time of the inspection that compaction of the solid waste could have been improved by spreading all the solid waste on the slope and properly compacting each two foot layer of solid waste individually. Greater compaction will increase the remaining life of area of the landfill and all future areas of the landfill.
4. It was observed that the solid waste was being properly covered with cover material but, there were some areas observed where the cover material had not been properly compacted. It is important to properly compact all cover material in order to reduce moisture infiltration and erosion.
5. The landfill was observed operating in the extreme southwest corner of the landfill site which was at a lower elevation than the remaining area of the landfill. The remaining areas of the landfill had all been brought up to the same elevation which was observed to be within about five (5) feet of the final elevation for the landfill. These areas had all been properly covered and possibly contained one to two feet of cover material on them. It is recommended that the remaining few feet of landfill capacity not be utilized in order not to disturb the integrity of the cover material already placed and to avoid the problems of operating over a very large flat area.
6. The Department had been in contact with your consulting engineer concerning the proposed expansion of the landfill into the quarry pit to the north and the large hole dug between the existing sanitary and demolition landfills. Every effort will be made by the Department to review the engineering plans for such expansions as soon as possible.

Page Three  
November 4, 1977

7. A small amount of water was observed ponding near the center of the existing landfill. The low area should be filled to help promote rapid runoff of the surface water on site. Such ponding can possibly increase the amount of leachate produced.

CONCLUSION:

It appeared that the routine operation was going very well with the exception of the few comments and recommendations noted above.

The main problems observed were proper monitoring and treatment of leachate produced on the site and the proposed expansion of the landfill due to the declining amount of capacity left in the existing permitted area. The Department will make every effort to rapidly review the engineering plans already submitted and the plans to be submitted in the future but, the owner operator and consulting engineer for the landfill should also make every effort to help speed the review process along. With complete cooperation of everyone concerned, it is felt that all questions concerning the expansion can be worked out to everyone's satisfaction.

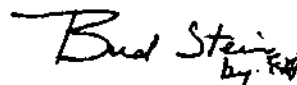
If you have any questions concerning the above comments and recommendations please feel free to give us a call at our St. Louis Regional Office.

APPROVED:



EARL F. HOLTGRAEWE, P.E.  
Regional Administrator  
St. Louis Regional Office  
Department of Natural Resources

SUBMITTED BY:



BUD STEIN  
Environmental Engineer II  
St. Louis Regional Office  
Department of Natural Resources

EPH/BS/lb

CC: Paul Bemebaugh, Consulting Engineer  
Earl Brendon, 2337 Telegraph Road  
St. Louis County Health Department  
CO, SW

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL QUALITY

SANITARY LANDFILL SURVEILLANCE RECORD

RECEIVED

NOV 9 1977

BUREAU OF  
SOLID WASTE MANAGEMENT

Date: 10/4/77 Days/Week Open: 6  
Name of Sanitary Landfill: West Lake Landfill, Inc. Sanitary Landfill  
Permit No: 118903 County: St. Louis  
Owner: West Lake Inc. Operator: same as owner  
Address: Route 1, Box 206 Address: \_\_\_\_\_  
Bridgeton, Mo. 63044

I. Special Conditions and Approved Modifications

A. Are there any special conditions or approved modifications of the satisfactory compliance subsections of the rules and regulations? (e.g. impermeable barrier, limited excavation, exceptions to daily cover requirements) X Yes \_\_\_\_\_ No

B. Is the sanitary landfill operation in compliance with the special conditions or approved modifications? (If "No," describe violations under "REMARKS.") X Yes \_\_\_\_\_ No

II. Check Types of Waste Accepted

	INDICATED ON PERMIT APPLICATION	REPORTED BY OPERATOR	AS OBSERVED
Municipal solid waste	<u>X</u>	<u>X</u>	<u>X</u>
Bulky waste			
Dead animals			
Incinerator residue			
Demolition and construction waste			
Brush and untreated wood waste			
Septic tank pumpings			
Wastewater treatment plant sludges			
OTHER SLUDGES (SPECIFY)			
LIQUIDS (SPECIFY)			
INDUSTRIAL PROCESS WASTE (SPECIFY)			
HAZARDOUS WASTES (SPECIFY)			
OTHER WASTES (SPECIFY)			

III. Remaining Life of Landfill

A. Estimated average volume of compacted solid waste received.  
\_\_\_\_\_ (tons, yards/day, week)

B. Estimated volume of remaining landfill covered by approved engineering plans.  
\_\_\_\_\_ acre feet

*possibly two to  
three months  
additional space*

#### IV. Satisfactory Compliance Subsections Regulations 80-3.010

Check all subsections: SAT — Satisfactory; UNS — Unsatisfactory. (If necessary describe "UNS" violations under "Remarks.")

SUBSECTION NUMBER	SATISFACTORY COMPLIANCE OPERATING PROCEDURE	SAT	UNS
<b>(2) SOLID WASTE ACCEPTED</b>			
(2)(C)1	Routine Sanitary landfill techniques of spreading and compacting solid waste and placing cover material daily.	X	
(2)(C)2	Bulky solid waste crushed on solid ground and pushed onto working face near bottom of the cell.	X	
(2)(C)3	Small dead animals covered immediately with soil or solid waste. Large dead animals placed in pit and covered with four feet compacted soil.	X	
(2)(C)4	Disposal of dewatered sludges on working face along with municipal solid waste.	X	
(2)(C)5	Incinerator and air pollution control residues prevented from becoming airborne.	X	
<b>(3) SOLID WASTE EXCLUDED</b>			
(3)(C)1	No unpermitted waste accepted.	X	
(3)(C)2	Sign posted at entrance listing excluded wastes.	X	
<b>(4) SITE SELECTION</b>			
(4)(C)1	Site accessible in all weather conditions. Temporary roads provided for delivery to working face.	X	
(4)(C)2	Public roads or access roads to the site above flood elevation.	X	
<b>(6) WATER QUALITY</b>			
(6)(C)1	Surface water courses and runoff properly diverted from the landfill. Sanitary landfill construction and grading to promote rapid surface water runoff without excessive erosion.	X	
(6)(C)2	Leachate collection and treatment systems utilized where necessary to protect ground and surface water resources.		X
(6)(C)3	No groundwater in contact with solid waste.	X	
<b>(7) AIR QUALITY</b>			
(7)(C)	No open burning without written permission of the proper air pollution agency and the Division.	X	
<b>(8) GAS CONTROL</b>			
(8)(C)1	Decomposition gases adequately vented to prevent danger to occupants of adjacent property.	X	
(8)(C)2	Decomposition gases vented in a manner to prohibit accumulation in explosive or toxic concentrations.	X	
<b>(9) VECTORS</b>			
(9)(C)	Vector control programs implemented when necessary to prevent or rectify vector problems.	X	
<b>(10) AESTHETICS</b>			
(10)(C)1	Litter control devices utilized near working face and elsewhere as needed. Litter collected from fences, and the ground surface, and incorporated into the daily cell at the end of each day or containerized.	X	
(10)(C)2	Wastes easily moved by wind covered as necessary to prevent their becoming airborne and scattered.	X	

SUBSECTION NUMBER	SATISFACTORY COMPLIANCE OPERATING PROCEDURE	SAT	UN
<b>(10) AESTHETICS (continued)</b>			
(10)(C)3	On-site vegetation and natural windbreaks being utilized to improve appearance and operation of the sanitary landfill.	X	
(10)(C)4	Salvaged materials removed daily or stored in aesthetically acceptable containers or enclosures.	X	
<b>(11) COVER MATERIAL</b>			
(11)(C)1	Daily cover applied regardless of weather in not less than a six inch layer. Cover material available in all weather conditions.	X	
(11)(C)2	Intermediate cover applied to all areas idle for more than 60 days in a layer not less than one foot after compaction.	X	
(11)(C)3	Final cover applied on each area as completed in a layer not less than two feet after compaction.	X	
<b>(12) COMPACTION</b>			
(12)(C)1	Adequate equipment on-site, operated daily.	X	
(12)(C)1A	Solid waste spread in layers not to exceed two feet and confined to smallest practical area.		X
(12)(C)1B	Wastes compacted to smallest practical volume.		X
(12)(C)1C	Cover material compacted as much as practical.		X
(12)(C)2	Preventive maintenance performed.		X
(12)(C)3	Daily task operating manual provided.		X
<b>(13) SAFETY</b>			
(13)(C)1	Fire extinguishers provided on oil equipment.		X
(13)(C)2	Provisions for extinguishing fires in waste, equipment and structures.		X
(13)(C)3	Communication equipment available.		X
(13)(C)4	Scavenging prohibited.		X
(13)(C)5	Controlled access to site by established roadways and limited to hours when operating personnel are on duty.		X
(13)(C)6	Traffic controlled and directed to appropriate disposing points.		X
(13)(C)7	Dust controlled for safety purposes and to prevent nuisances.		X
<b>(14) RECORDS</b>			
(14)(C)1A	Records of major problems and complaints.		X
(14)(C)1B	Monitoring record maintained. a. leachate sampling and analyses. b. gas sampling and analyses. c. ground and surface water analyses.		X
(14)(C)1C	Records of vector control efforts.		X
(14)(C)1D	Records of dust and litter control efforts.		X
(14)(C)1E	Records of quantity of waste handled.		X
(14)(C)1F	Records of description, sources, and volume of special wastes listed in Subsection (3)(A).		X

#### V. Operation Proceeding in Accordance With Approved Engineer Plans? (If "No," describe violations under "Remarks.")

Yes ☒ No ☐

REMARKS 2 more groundwater monitoring wells need to be drilled  
sampling of leachate needs to be done; possibly spreading solid  
waste in layer too thick; cover material needs to be compacted  
better in some areas; landfill running out of room.  
 (Attach additional sheets as necessary.)

BY

Bud Stern

SIGNATURE OF INVESTIGATOR